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Improved watercraft fin

(51) International Patent Classification(s)
B63B 041/00

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(71) Applicant(s)
Michael Weberling; Duncan Davenport

(54) Inventor(s)
Michael Weberling

FORM 1

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COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952

APPLICATION FOR A STANDARD PATENT

Michael Weberling, of 63 Towradgi Street, Narrabeena, New South Wales, 2099, AUSTRALIA; Duncan Davenport, of No. 1, 86 Campbell Parade, Manly Vale, New South Wales, 2093, AUSTRALIA, hereby apply for the grant of a standard patent for an invention entitled:

Improved Watercraft Fin
which is described in the accompanying provisional specification.

The address for service is:-

Spruson & Ferguson
Patent Attorneys
Level 33 St Martins Tower
31 Market Street
Sydney New South Wales Australia

DATED this TWELFTH day of FEBRUARY 1990

Michael Weberling, Duncan Davenport

By:



Registered Patent Attorney

TO: THE COMMISSIONER OF PATENTS
OUR REF: 121126
S&F CODE: 15881

REPRINT OF RECEIPT

5013015 12/02/90

5805/2

SPRUSON & FERGUSON

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952

DECLARATION IN SUPPORT OF AN
APPLICATION FOR PATENT

In support of the application made by Michael Weberling and Duncan Davenport,
for a patent for an invention entitled

Improved Watercraft Fin

We, Michael Weberling and Duncan Davenport, of 63 Towradgi Street, Narraween,
New South Wales, 2099, Australia and No. 1, 86 Campbell Parade, Manly Vale,
New South Wales, 2093, Australia

both do solemnly and sincerely declare as follows:-

1. We are the applicants for the patent.
2. Michael Weberling is applying as actual inventor of the invention and
the said Duncan Davenport is applying jointly as assignee from the said
inventor of a 50% part interest in the invention.

DECLARED at

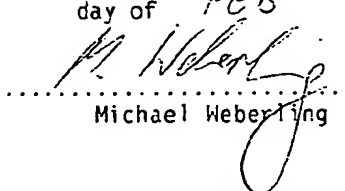
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Michael Weberling

DECLARED at

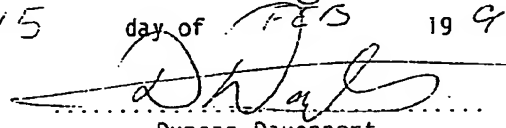
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Duncan Davenport

TO: THE COMMISSIONER OF PATENTS
AUSTRALIA
S&F REF: 121126

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(12) PATENT ABSTRACT **(11) Document No. AU-A-70912/91**
(19) AUSTRALIAN PATENT OFFICE

(54) Title
IMPROVED WATERCRAFT FIN

International Patent Classification(s)
(51)⁵ B63B 041/00

(21) Application No. : 70912/91 (22) Application Date : 12.02.90

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(60) Related to Provisional(s) : PJ8607

(71) Applicant(s)
MICHAEL WEBERLING; DUNCAN DAVENPORT

(72) Inventor(s)
MICHAEL WEBERLING

(74) Attorney or Agent
SPRUSON & FERGUSON, GPO Box 3898, SYDNEY NSW 2001

(57) Claim

1. A watercraft fin comprising:
a body having a fin shape and at least one recess extending
between side surfaces of the body;
an external skin covering each side surfaces of the body;
whereby the fin has a density less than water.

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FORM 10

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952

COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE:

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Name and Address
of Applicant:

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Level 33 St Martins Tower, 31 Market Street,
Sydney, New South Wales, 2000, Australia

Complete Specification for the invention entitled:

REPRINT OF RECEIPT
5019348 08/02/91

Improved Watercraft Fin

The following statement is a full description of this invention, including the
best method of performing it known to me/us

5815/2

IMPROVED WATERCRAFT FIN

The present invention relates to an improved fin for watercraft such as surfboards, sailboards etc.

5 It is well known to provide a "fin box" on watercraft which allows a specially designed fin to slide therealong so as to provide for selection of an optimum position relative to the nose of the craft. That is, fin boxes are generally elongate channels which, when fitted onto the craft, extend in a direction generally towards the nose of the craft.

10 The fins are designed to slide in the fin box and are adapted to be fixed into the desired position by, for example a clamping arrangement. However, it is not uncommon for the clamping arrangement to fail or for the mounting portion of the fin itself to break whereby the fin can simply fall out of the fin box. Such failure or breakage does not necessarily mean the fin is no longer useful.

15 Fins are usually constructed from an epoxy resin moulded into a solid having the desired shape. With such construction the fin is denser than water.

Accordingly, when a fin falls out of a fin box it will generally sink to the bottom and be lost.

20 It is the object of the present invention to overcome this disadvantage of the prior art fins.

In one broad form the present invention provides a fin for attachment to a watercraft comprising:

25 a body having a fin shape and at least one recess extending between side surfaces of the body;
and an external skin covering each of said side surfaces of the body; whereby said fin has a density less than water.

30 Preferably, the body has a plurality of recesses extending between and covering a large proportion of the surface area of the side faces of the fin leaving the body with a mounting portion, a peripheral edge and a series of web members transversing the peripheral edge.

A preferred form of the present invention will now be described by way of example with reference to the accompanying drawings wherein

35 Figure 1 shows a side elevational view of the fin of the present invention.

Figure 2 shows a cross-sectional view of the fin of Figure 1 along a-a. There is shown in the Figure a fin 10 having a body or frame 11 comprising a generally U-shaped peripheral edge member 12 which defines the peripheral form of the fin 10, and a series of web members 13 integral with and extending between the edge member 12 so as to define a plurality of recesses 14 therebetween. The body can be polymeric or metallic. A 3-5 mm aluminium plate may be used. Aluminium provides a light and rigid framework. The recesses extend between the side surfaces of the fin. There is preferably between 4 to 8 recesses in the body 11. The body 11 further comprises an elongate mounting portion 15 adapted to be received in a fin box of a watercraft.

The embodiment depicted in the Figure has four recesses. The first recess 14A is defined by the edge member 12 and a web member 13A generally parallel with and spaced from the mounting portion 15. The mounting portion 15, the web member 13A, the edge member 12 and two further web members 13B and C which are parallel and spaced, and web members extend between and normal to the mounting portion 15 and the web member 13A.

The body 11 is covered with two skin layers 17 of fibreglass on each side face which enclose the recesses 14. The fin 10 has the standard external fin shape and closed internal recesses or air gaps so that the fin 10 is buoyant in water. In the alternative the skin may be formed using sheets of foam which are in turn covered with resin or fibreglass type material.

An auxilliary fin 16 proportionally much smaller than the primary fin 10 is provided forward of the leading edge and integral with the fin 10. The fin 16 is preferably solid moulded resin although it may also have a skin layer enclosing recesses so that it adds to the overall buoyancy of the fin 10.

CLAIMS

The claims defining the invention are as follows:

1. A watercraft fin comprising:
a body having a fin shape and at least one recess extending between side surfaces of the body;
an external skin covering each side surfaces of the body;
whereby the fin has a density less than water.
2. The fin of claim 1, wherein:
the body further comprises a peripheral edge and whereby one or more web members transverse the peripheral edge to define two or more recesses.
3. The fin of either of claims 1 or 2, wherein:
the body has formed therein between 4 and 8 recesses.
4. The fin of any one of claims 1-3, further comprising:
an elongated mounting portion adapted to be received by a fin box of a watercraft.
5. The fin of any one of claims 1-4, wherein:
the skin comprises one or more layers of fibreglass.
6. The fin of any one of claims 1-5, wherein:
the fin has a leading edge; and
an integral auxiliary fin is provided forward of the leading edge.
7. The fin of claim 6, wherein:
the auxiliary fin further comprises a recess enclosed by an exterior skin.
8. The fin of any one of claims 1-7, wherein:
the body is aluminium.
9. The fin of any one of claims 1-4, wherein:
the body is aluminium and the skin is formed from foam sheet laminated with resin or fibreglass.
10. A fin, substantially as hereinbefore described with reference to the drawings.

DATED this SEVENTH day of FEBRUARY 1991

Michael Weberling
Duncan Davenport

Patent Attorneys for the Applicants
SPRUSON & FERGUSON

DRAWINGS

70912/91

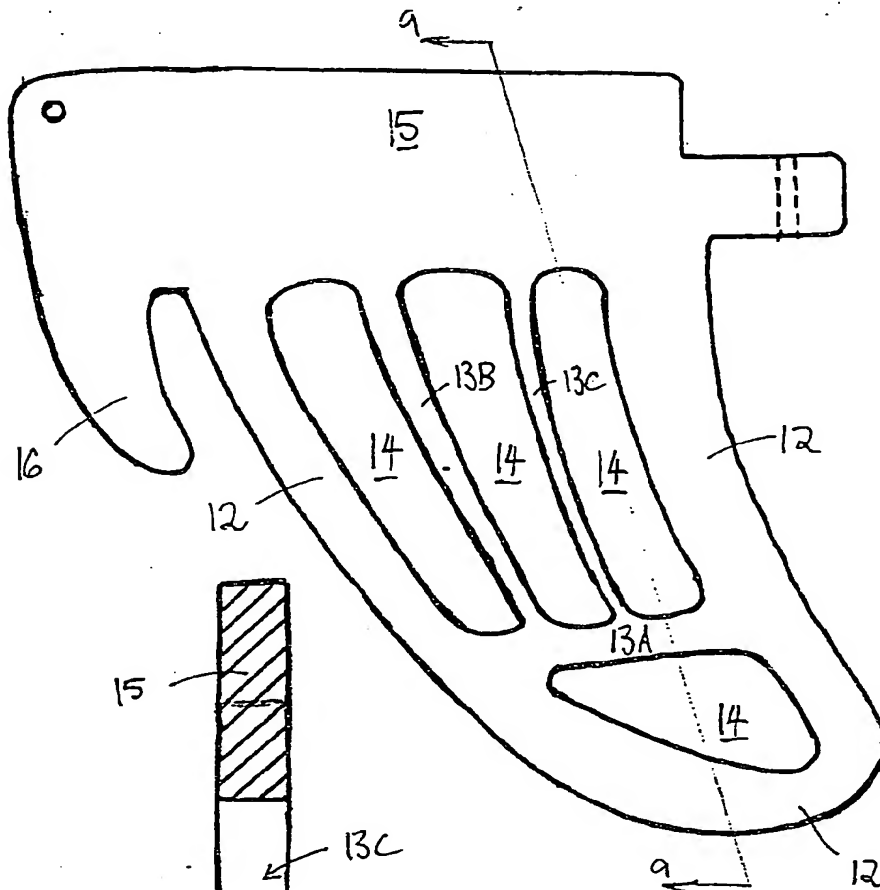


FIG. 1

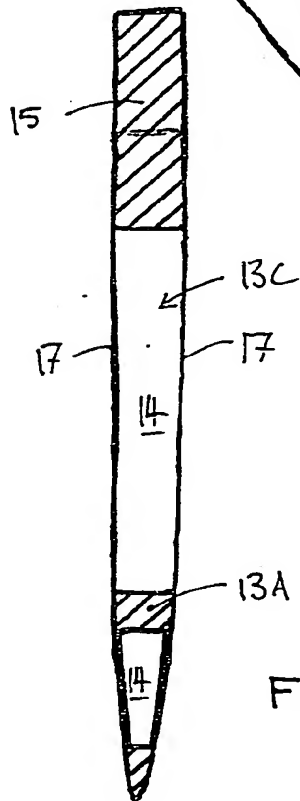


FIG. 2

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